

PRESSURE REDUCTION APPARATUS AND METHOD

ABSTRACT OF THE DISCLOSURE

A pressure reduction apparatus is disclosed. Air at high pressure and temperature may be drawn from a source such as a bleed valve of a gas turbine engine that supplies the air to an airplane interior. The air is passed to a pressure reduction vessel. The vessel has sufficient volume such that the high pressure air, upon entering the vessel, will reduce in temperature and pressure. The pressure reduction apparatus allows the air to depressurize and drop in temperature to near ambient conditions. Upon exiting the pressure reduction apparatus, the air is at a temperature and pressure sufficient to allow the air to be sampled and analyzed by conventional equipment used for testing for airborne impurities such as semivolatile compounds and particulates.